IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: David DiFrancesco Application No.: 10/698,954 Filed: October 31, 2003 For: COMPONENT COLOR FLAT PANEL DIGITAL FILM RECORDER AND METHOD Customer No.: 68218	Confirmation No. 8801 Examiner: Anyikire, Chikaodili E. Technology Center/Art Unit: 2621 DECLARATION UNDER 35 U.S.C.§1.132 OVERCOMING REJECTIONS

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In connection with the examination of the above-referenced application, I, Gary K. Starkweather, declare as follows:

1. I have been employed by Microsoft Research of Microsoft Corporation since 1997. My current specialty and areas of research are in display technology.
2. Over the past four decades I have invented and patented dozens of inventions related to displays, color computing and laser printing.
3. I was elected a member of the National Academy of Engineering in 2004 for innovative application of optical technologies to computing, including invention of the laser printer.
4. I won a technical Academy Award (Oscar) in 1994 in connection with consulting work for Pixar on methods of film input scanning. I am not an employee nor currently a paid consultant to Pixar.
5. I was a researcher for Apple Computer from 1987 to 1997 during which time I invented color management technology and developed color calibration techniques for imaging systems.

6. I was a research scientist at Xerox and later Xerox PARC from 1963 to 1987. I invented the laser printer, the technology of which became the Xerox 9700, the first commercial laser printer.
7. I completed graduate work in Optical Engineering at the University of Rochester in 1964 during which time I also worked for Bausch & Lomb.
8. For these and other reasons, I believe I am sufficiently qualified to opine on the nonobviousness of an invention based on knowledge of the state of the art and the level of ordinary skill in the art.
9. I have read and understand the specification and claims of U.S. Patent Application Serial No. 10/698,954 filed October 31, 2003 in the name of David DiFrancesco and assigned to Pixar.
10. I am also personally acquainted with David DiFrancesco and have discussed this invention with him, but I have no financial interest nor am I currently a consultant to Pixar.
11. I have read the office action dated August 4, 2009 issued by the U.S. Patent and Trademark Office.
12. In my opinion the DiFrancesco invention represents a non-obvious advance over the state of the art represented by U.S. Patent No. 4,757,374 to Ramsay et al. alone, as well as in combination with other references including U.S. Patent No. 5,653,522 to Lee and U.S. Publication 2002/0163676 of Jones. My grounds for this opinion are as follows:
13. The DiFrancesco invention discloses new processes for producing theater-quality motion picture film from digital, computer generated source material. It overcomes some of the significant problems associated with digital film production.
14. The Ramsay patent merely discloses a tele-cine transfer device intended for the television industry. It does not teach or disclose a digital film recorder suitable for theaters and thus offers no contributions to the motion picture film recording process. This is a key and fundamental point in assessing the patentability of the DiFrancesco invention.
15. In reference to claim 1, Ramsay evidently shows a film camera option. However, a film camera in the chain does not make it a film recorder device in the spirit of the current definition used in the Computer Graphics industry for Film Recorders. This is true because in Ramsay's case there is no digital source that the film camera is looking at: See Figure 14 through 19 for content sources, none of which are digitally addressable. Further Ramsay merely describes a modular system for reproducing and recording images from original

slides, film strips, microfiche, or the like, not any of which are digitally addressable or have any relationship to digital motion picture production. Ramsay's device records from a still image into a video or film source another image with emphasis on the lens systems and adjustments employed. Ramsay does not describe a digital source (Figure 11, element 45) that could take the place of a single transparent image with a flat panel because the idea simply didn't exist at the time; otherwise he wouldn't have needed to describe all the optics and adjustment procedures and camera options outlined in his Background and Summary statement.

16. Respecting claim 2, Ramsay describes a flat panel not as a digitally addressable flat panel display but rather a mere static flat panel structure upon which a film strip might be mounted and externally illuminated from the background. Digital LCD or OLED flat panels are also illuminated from the rear, but not always, and this may be the source of confusion between this patent application 10/698,954 and Ramsay's patent.
17. Lee, cited to overcome the deficiencies of Ramsay, does not contain sufficient teaching that would reasonably suggest its combination with Ramsay to achieve the DiFrancesco invention as claimed in claim 1. Lee discloses an alignment system for an LCD projector wherein three surfaces of three different LCD panels within the projector can be optically aligned to each other simultaneously. Nothing suggests a single flat panel display capable of displaying all of the different color components of each pixel sequentially. Nothing suggests an alignment unit coupled both to the display and to a film recording device. In fact the Lee reference addresses the problem of alignment of three different projection LCD panel units within a projector wherein lenses within the projection unit create spatial aberrations across the display..
18. Claim 12 is subject to the same distinctions as outlined for Claim 1 above. Claim 12 describes a process for sequential exposure of monochromatic images onto a film recording device.
19. Claims 13 is subject to the same distinctions as outlined for Claim 2 above. The additional external illumination is not taught for exposure to a digital film recorder.
20. The reference to Jones is evidently cited out of context. Jones describes a digital mastering system built around a pixel by pixel scanning process. The DiFrancesco invention does not involve scanning as part of the film recording process.

21. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Mary K. Lakeworth

Dated: August 31, 2009

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